

Gravatt, Dan

From: Kiefer, Robyn V NWK <Robyn.V.Kiefer@usace.army.mil>
Sent: Monday, June 30, 2014 3:37 PM
To: Field, Jeff; Gravatt, Dan
Cc: Young, Scott E NWK
Subject: West Lake IAG 2 Draft LOE (UNCLASSIFIED)
Attachments: Draft West Lake ITR Level of Effort Estimate 30 Jun 2014.xlsx; ITR IAG - Part 2 Breakout-FY14 (Direct, Indirect, Fringe).xlsx; Draft WL ITR Scope 13 Jun 2014 .docx

Classification: UNCLASSIFIED

Caveats: NONE

Jeff/Dan:

See attached draft level of effort (LOE) estimate for performing the Independent Technical Reviews (ITRs) for the documents generated as a result of the NRRB comments on the West Lake Supplemental Feasibility Study. Following are the key assumptions:

1. LOE is consistent with draft Scope of Work dated June 13, 2014 (also attached) with the exception of close out activities. Close-out cost estimates were not provided in this LOE and will be submitted for inclusion in a future IAG amendment when close-out is pending.
2. Note that this cost estimate is for ITRs on 5 separate documents. If fewer documents can be generated, the LOE can be reduced by less time spent on coordination, meetings, reviews, community relations support, and report production.
3. This cost estimate does not include ITR for the Proposed Plan or ROD.

We request an opportunity to discuss the draft scope of work, ITR process, and LOE with you once you've had a chance to review.

Respectfully,

Robyn Kiefer
Project Manager
US Army Corps of Engineers
Office: 816-389-3615
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Classification: UNCLASSIFIED

Caveats: NONE

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Superfund

STATEMENT OF WORK

Independent Technical Review for Operable Unit 1 at the West Lake Landfill Site

1. BACKGROUND INFORMATION

The West Lake Landfill Site is on a parcel of approximately 200 acres located in the northwestern portion of the St. Louis metropolitan area. It is situated approximately one mile north of the intersection of Interstate 70 and Interstate 270 within the limits of the city of Bridgeton in northwestern St. Louis County. The Missouri River lies about 1.5 miles to the north and west of the Site.

The Site consists of two radiologically contaminated landfill cells comprising Operable Unit 1 (OU-1) and the Bridgeton Sanitary Landfill (Former Active Sanitary Landfill) and several inactive areas with sanitary and demolition fill that have been closed comprising OU-2. Land use at the site and the surrounding areas in Earth City is industrial.

Other facilities which are not subject to this response action are located on the 200-acre parcel including concrete and asphalt batch plants, a solid waste transfer station, and an automobile repair shop.

The Site was used agriculturally until a limestone quarrying and crushing operation began in 1939. The quarrying operation continued until 1988 and resulted in two quarry pits. Beginning in the early 1950s, portions of the quarried areas and adjacent areas were used for landfilling municipal solid waste (MSW), industrial solid wastes, and construction/demolition debris. These operations were not subject to state permitting because they occurred prior to the formation of the Missouri Department of Natural Resources (MDNR) in 1974. Two landfill areas were radiologically contaminated in 1973 when they received soil mixed with leached barium sulfate residues.

The barium sulfate residues, containing traces of uranium, thorium, and their long-lived daughter products, were some of the uranium ore processing residues initially stored by the Atomic Energy Commission (AEC) on a 21.7 acre tract of land in a then undeveloped area of north St. Louis County, now known as the St. Louis Airport Site (SLAPS), which is part of the St. Louis Formerly Utilized Sites Remedial Action Program managed by the U.S. Army Corps of Engineers (USACE)

In 1966, residues associated with the production and refining of uranium materials were purchased by Continental Mining and Milling Company of Chicago, removed from the SLAPS, and placed in storage at the Hazelwood Interim Storage Site (HISS) on Latty Avenue under an AEC license. In 1967, Commercial Discount Corporation, which obtained possession of the HISS property and residuals, began drying residue and shipping them to Cotter Corporation in Canon City, Colorado (DOE 1987). In 1969,

residues remaining at the HISS were sold to Cotter Corporation in Canon City. In 1970, Cotter Corporation dried and shipped some of the remaining residues from the HISS to Canon City (DOE 1994). In December 1970, an estimated 10,000 tons of Colorado raffinate and 8,700 tons of leached barium sulfate remained at the Latty Avenue HISS.

Reportedly, 8,700 tons of leached barium sulfate residues were mixed with approximately 39,000 tons of soil and then transported to the West Lake site in 1973. According to the landfill operator, the soil was used as cover for municipal refuse in routine landfill operations.

The geology of the landfill area consists of Paleozoic-age sedimentary rocks overlying Pre-Cambrian-age igneous and metamorphic rocks. The Paleozoic bedrock is overlain by unconsolidated alluvial and loess deposits of recent (Holocene) age. Alluvial deposits of varying thickness are present beneath Areas 1 and 2. The landfill debris varies in thickness from 5 to 56 feet in Areas 1 and 2, with an average thickness of approximately 30 feet in Area 2. The underlying alluvium increases in thickness from east to west beneath Area 1. The alluvial thickness beneath the southeastern portion of Area 1 is less than 5 feet (bottom elevation of 420 ft/amsl) while the thickness along the northwestern edge of Area 1 is approximately 80 feet (bottom elevation of 370 ft/amsl). The thickness of the alluvial deposits beneath Area 2 is fairly uniform at approximately 100 feet (bottom elevations of 335 ft/amsl).

A subsurface oxidation event (SSE) is ongoing in the South Quarry Landfill portion of the Bridgeton Sanitary Landfill. The South Quarry cell is connected to the North Quarry cell which is adjacent to Operable Unit 1, Area 1, one of the locations on site that received the radiologically contaminated soils in 1973. Pursuant to an order from the Missouri Attorney General, the site owner is required to install a subsurface barrier between the North Quarry cell and OU-1 Area 1 to prevent the SSE from migrating into the radiologically contaminated materials.

As a follow-up to EPA R7 consultation with EPA's National Remedy Review Board (NRRB) in February 2012, the following evaluations are being conducted to assess the Remedial Alternatives for OU-1: 1) partial excavation evaluation; 2) alternative landfill cap designs; 3) evaluation on the use of waste treatment technologies, including apatite; 4) recalculation of RIM volumes for a full excavation scenario; 5) groundwater fate and transport modeling; and 6) recalculation of discount rate. These evaluations will be contained in a forthcoming Supplemental Feasibility Study (SSFS) Amendment or equivalent document.

II. OBJECTIVE AND SCOPE

The EPA is requesting assistance from the US Army Corps of Engineers (USACE) to conduct an Independent Technical Review (ITR) of specific documents associated with Operable Unit-1 at the West Lake Landfill and being developed in response to National Remedy Review Board (NRRB) comments.

The technical support may consist of performance of specific tasks which USEPA contractors have neither the expertise or cannot provide at reasonable cost to EPA.

III. WORK ASSIGNMENT TASKS

USACE shall furnish personnel and services required to conduct an ITR of reports prepared by the Responsible Parties in response to the recommended NRRB evaluation.

Tasks included in this scope are:

1. Project Planning and Support
2. Independent Technical Reviews
3. Community Relations Support
4. Close-Out

TASK 1 PROJECT PLANNING AND SUPPORT

This task includes work efforts related to project initiation, management, and support. Activities required under this task include the following, as applicable:

- 1.1 USACE shall participate in a scoping meeting with EPA to discuss the work assignment.
- 1.2 USACE shall provide proposed level of effort and costs for the support activities to be performed. Based on EPA's review of the scope, level of effort and cost estimate, USACE may be called upon to participate in negotiations with EPA on the proposed level of effort and to revise the level of effort as a result of these negotiations.
- 1.3 The USACE shall perform site-specific project management including:
 - 1.3.1 Establishment and maintenance of necessary work assignment files, schedules, and project documentation
 - 1.3.2 Provide monthly reporting and invoices. These documents shall contain narrative of specific task and subtask activities sufficient enough for the

EPA Remedial Project Manager (RPM) to evaluate the work assignment progress.

- 1.3.3 Monitor costs and performance
 - 1.3.4 Coordinate staffing and other support activities to perform the work assignment tasks in accordance with the Statement of Work (SOW) including USACE subcontractors, if utilized.
 - 1.3.5 Attend necessary work assignment meetings
- 1.3 The USACE shall accommodate any external audit or review mechanism that EPA may require. Level of effort for this work will be determined at a later date and this IA will be amended to include this task and associated cost.

TASK 2 INDEPENDENT TECHICAL REVIEWS

This task includes the work required to conduct the ITR and documents the required deliverables.

- 2.1 USACE shall coordinate and prepare a review plan and assist EPA in preparing the reviewer's charge statement.
- 2.2 USACE shall perform an ITR of reports prepared by the Responsible Parties (RPs) in response to the NRRB consultation with EPA on the Supplemental Feasibility Study dated December 28, 2011. The purpose of the ITR is to provide an independent assessment of the RP's work products to ensure the scientific and technical components have been applied in a sound manner to meet established regulatory requirements. The ITR will be conducted by qualified individuals who are independent of those who performed the work, and who are collectively equivalent in technical expertise (i.e., peers) to those who prepared the reports.

The reports prepared in response to the NRBB recommendations will include:

2.2.1 Up to four ITR reports to address the following:

- The RP's evaluation of a partial excavation alternative;
- The RP's recalculation of RIM volumes to address alternate excavation scenario;
- The RP's evaluation of up to three alternative landfill cap designs;
- The RP's evaluation on the use of up to five waste treatment technologies, including apatite and soil sorting;
- The RP's results of groundwater fate and transport modeling; and
- The RP's recalculation of all alternatives using a 7% discount rate.

2.2.2. A Supplemental Feasibility Study Addendum or equivalent document.

2.2.3 A Revised Proposed Plan, if required. If a Revised Proposed Plan is required, the level of effort for the ITR will be determined at a later date and this IA will be amended to include this task and associated cost.

2.2.4 An Amended ROD, if required. If a Revised ROD is required, the level of effort for the ITR will be determined at a later date and this IA will be amended to include this task and associated cost.

2.3 USACE ITR team will review historical documents for familiarity and understanding of the site. Historical documents will not be the subject of the ITR. Historical documents to be reviewed include, but may not be limited to the following:

- OU1 Site Characterization Summary Report
- OU1 Remedial Investigation Report
- OU1 Baseline Risk Assessment
- OU1 Feasibility Study
- OU1 Supplemental Feasibility Study
- OU1 Record of Decision
- EPA Radiological and Infrared Survey Report (ASPECT) (May 2013)
- MDNR Radiological Survey Report (May 2013)
- Radiation Management Corporation Radiological Survey (1982)
- NRC Radioactive Material in West Lake Landfill (1988)

2.4 USACE shall prepare an ITR report for each of the documents reviewed. The letter report will contain USACE's technical evaluation and, to the extent practicable, shall be written in terms understood by the general public. The letter report will be submitted to EPA as a "final" product. The number of days allotted for completion of the ITR will be jointly determined and agreed upon by EPA and USACE based upon the size and nature of the document to be reviewed, but shall be no less than 45 calendar days for any review.

2.5 The USACE ITR will focus exclusively on the scientific and technical aspects of the documents and whether the scientific and technical components have been applied in a sound manner to meet established regulatory requirements. It will not address grammatical, editorial, or formatting aspects of the document.

2.6 The USACE ITR team shall participate in one technical meeting with EPA and the RPs for each of the documents reviewed. The purpose of these meetings will be to provide clarification on any comments. These meetings will be conducted in the St. Louis area. If not able to be accomplished via an in-person meeting, the meeting shall be accomplished by phone and internet (Web Meeting).

2.7 EPA shall furnish USACE with the following:

- 2.7.1 Background documents, data, and other information necessary to ensure the ITR's completeness;

- 2.7.2 Notification, at least 30 days in advance, of submittal of a document for review
- 2.7.3 A tentative schedule identifying anticipated document submittal dates, review times, and meetings.

TASK 3 COMMUNITY RELATIONS SUPPORT

This task includes efforts related to community relations support to EPA. Activities required under this task include the following:

- 3.1 Upon issuance of this IA, USACE shall attend two community meetings to inform the public of USACE's support to EPA under this IA and answer questions. For the initial public meeting after IA release, USACE will prepare a Power Point presentation or other visual aids, as required to communicate the ITR process to the public. For the second public meeting after the IA release, USACE shall attend to answer any remaining public questions regarding the IA scope.
- 3.2 Upon completion of the review of each document, USACE staff shall attend a community meeting and present a description of the work accomplished by USACE and the findings of the ITR. The presentation will be provided via Power Point, or via other means, if required. An electronic file of the PowerPoint presentation shall be furnished to EPA at the meeting. USACE shall furnish 50 paper copies of the PowerPoint presentation for distribution to the public.
- 3.3 USACE staff shall be available to participate in pre- and post-meeting public availability sessions for the meetings at which the USACE reviews are presented. USACE shall provide necessary public availability session displays and information packets (up to 50 handouts of Power Point presentation).
- 3.4 EPA, as lead agency, shall be the central point of contact for all project stakeholders. If requested by EPA, USACE shall provide written responses to written questions received by EPA from the community regarding USACE's scope of work for the ITR effort.

TASK 4 WORK ASSIGNMENT CLOSE-OUT

This task includes efforts related to work assignment close-out. Activities required under this task include the following:

- 4.1 Upon notification by EPA, the USACE shall begin all internal procedures necessary to close out the work assignment including any file duplication, distribution, storage, or archiving per the contract requirements.

- 4.2 The USACE shall return documents identified to EPA or other document repositories as directed.

IV. WORK ASSIGNMENT PERIOD OF PERFORMANCE

July 15, 2014 to December 30, 2016

V. SCHEDULE OF DELIVERABLES/MILESTONES

TASK	DELIVERABLE	SUBMITTAL SCHEDULE
1.3.2	Monthly Reports/Invoices	Throughout period
2.2	ITR Reports	Per agreed upon schedule

VII. EPA CONTACTS

Project Manager	Dan Gravatt	913-551-7324
Project Officer	Ina Square	913-551-7357

West Lake Landfill DW969.....TBD IAG PART II BREAKOUT September 15, 2015			
Budget Categories	Current Amount	Requested Amount	New Total
a. Personnel	0.00	114,479.94	114,479.94
b. Fringe Benefits	0.00	68,687.96	68,687.96
c. Travel	0.00	13,320.00	13,320.00
d. Equipment	0.00	0.00	0.00
e. Supplies	0.00	0.00	0.00
f. Procurement Assistance	0.00	0.00	0.00
g. Construction	0.00	0.00	0.00
h. Other	0.00	0.00	0.00
i. Total Direct Charges	0.00	196,487.90	196,487.90
j. Indirect (62% of Personnel & Fringe)	0.00	113,564.10	113,564.10
k. Total Charges	0.00	310,052.00	310,052.00
Total USACE Budget: Reimb	0.00	0.00	0.00
Total A-E or Contract Budget: Direct	0.00	0.00	0.00

EPA RPM: Dan GravattUSACE PM: Robyn Kiefer

USACE Proposed Level of Effort for Internal Technical Review
30-Jun-14

Task - Project Planning & Support				
Discipline	Work Description	Level of Effort	Rate	Amount
Project Manager	General Project management - Process, File set up, monthly invoicing/reporting, resourcing, scheduling.	148	\$130	\$19,240
Budget Analyst	Monthly Bill prep/accounting, funding transfers	54	\$100	\$5,400
P2 Controls	P2 Initiation, monthly update	22	\$100	\$2,200
MVS Resource Coordination (Budget)	Funding receipt, labor code mgmt	16	\$100	\$1,600
Audit support	At EPA's request and to be executed in future IAG amendment	0	\$130	\$0
Total Task 1 - Project Planning & Support				\$28,440

Task - Independent Technical Review				
Discipline	Work Description	Level of Effort	Rate	Amount
Project Manager	PDT kickoff meeting (6), PDT coordination (40), QC reviews (5 documents x 10 hrs/doc), Prep Review Plan - 24 hrs, Prep Charge Statements 24 hrs, EPA coordination (36); 5 pre-review coordination meetings @ 4 hrs ea (including prep). Clarification Meetings - 4 individual documents and 1 SFS addendum @ 3 hrs each + 2 hrs prep for each meeting	223	\$130	\$28,990
Project Manager, Travel	Travel for meetings, 5 clarification meetings with EPA in St. Louis, 8 hrs travel	40	\$130	\$5,200
Project Manager, Per Diem	Per diem-5 clarification meetings x 2 days x \$174 + 5 trips x \$174 for rental car and gas	5	\$518	\$2,590
Tech Lead	Review Plan- 4, Charge Statements - 4 (review and comment), Historical doc review (10 docs, 4 hrs each), ITR comments (4 docs @ 40 hrs ea) + 1 large doc at 80 hrs; Meetings - 1 kickoff @ 2 hrs, 5 pre-review coordination meetings @ 1 hrs ea, 5 deliverable coordination meetings @ 2 hrs each, 5 clarification meetings with EPA @ 3 hrs each + (1 hrs prep x 10 meetings)	290	\$140	\$40,600
Tech Lead	Report Prep (5 ITR docs) 4 docs @ 16 hrs ea 1 doc @ 40 hrs	104	\$140	\$14,560
Geotechnical Engineer	Historical doc review - 10 docs x 2 hrs ea; ITR Review - 4 small docs @ 40 hrs ea + SFS @ 80 hrs; Meetings - 1 kickoff @ 2 hrs, 5 pre-review coordination meetings @ 1 hr each. 5 deliverable coordination meetings @ 2 hrs each, 5 clarification meetings with EPA @ 3 hrs each	292	\$145	\$42,340
Geotechnical Engineer, Travel	Travel for meetings, 5 clarification meetings with EPA in St. Louis, 8 hrs travel	40	\$145	\$5,800
Geotechnical Engineer, Per Diem	Per diem 5 meetings x 2 days x \$174/day + 5 trips x \$170 for rental car and gas	5	\$518	\$2,590
HP	Historical doc review - 10 docs x 4 hrs ea; ITR Review - 4 small docs @ 40 hrs ea + SFS @ 80 hrs; Meetings - 1 kickoff @ 2 hrs, 5 pre-review coordination meetings @ 2 hrs each. 5 deliverable coordination meetings @ 2 hrs each, 5 clarification meetings with EPA @ 3 hrs each	312	\$145	\$45,240
Geologist	Historical Doc Review - 3 docs (FS/SFS/RI) x 8 hrs; ITR SSFS (24); 1 kickoff meeting @ 2 hrs, 1 prereview coord meeting @ 1 hrs, 1 comment coord meeting @ 3 hrs, 1 clarification meeting with EPA @ 3 hrs.	57	\$130	\$7,410
Chemist	Historical Doc Review - 3 docs (FS/SFS/RI) x 8 hrs/doc; ITR SSFS (24); 1 kickoff meeting @ 2 hrs, 1 prereview coord meeting @ 1 hrs, 1 comment coord meeting @ 3 hrs, 1 clarification meeting with EPA @ 3 hrs.	57	\$130	\$7,410
Process Engineer	Historical Doc Review - 3 docs (FS/SFS/RI) x 8 hrs/doc; ITR 1 small doc (waste treatment doc) & SSFS (30); 1 kickoff meeting @ 2 hrs, 2 prereview coord meeting @ 1 hrs, 2 comment coord meeting @ 3 hrs, 2 clarification meeting with EPA @ 3 hrs.	70	\$145	\$10,150
Process Engineer, Travel	Travel for meetings, 2 clarification meetings with EPA in St. Louis, 8 hrs travel	16	\$145	\$2,320
Process Engineer, Per Diem	PerDiem 2 meetings x 2 daysx \$174/day	2	\$348	\$696
Modeler	Historical Doc Review - 3 docs (FS/SFS/RI) x 4 hrs/doc; ITR 1 small doc (waste treatment doc) & SSFS (48); 1 kickoff meeting @ 2 hrs, 2 prereview coord meeting @ 1 hrs, 2 comment coord meeting @ 3 hrs, 2 clarification meeting with EPA @ 3 hrs. Assumes call in for clarification meetings	76	\$145	\$11,020
QC Reviews	2 reviewers, 6 hrs/review for 4 reviews, 12hrs/review for 1 review	72	\$160	\$11,520
ITR Review - Proposed Plan	Proposed Plan ITR - Level of effort to be determined at a future time when IAG will be amended	0	TBD	\$0
ITR Review - ROD	ROD ITR - Level of effort to be determined at a future time when IAG will be amended.	0	TBD	\$0
Total Task 2 - ITR				\$238,436

Task - Community Relations Support				
Discipline	Work Description	Level of Effort	Rate	Amount
Project Management	2 Public Meetings - Scope Explanation, 5 Public Meetings Post Review, (4 hrs for meeting, 8 hrs for travel, prep 4 hr)	112	\$130	\$14,560
Tech Lead	Post Review Public Meeting 5 meetings x 4 hrs/meeting and 4 hrs/meeting for prep	40	\$140	\$5,600
HP, Geotechnical	Public meetings - 5 meetings x ((4 hrs/meeting including public availability + 4 hrs prep) + 8hrs travel/meeting for geotech)	120	\$140	\$16,800
PM, Geotechnical, Per Diem	12 trips x ((2 days/trip x \$174/day) + \$170 (car & gas))	12	\$518	\$6,216
Total Task 3 - Community Relations Support				\$43,176

Task - Close Out - deferred to future				
Discipline	Work Description	Level of Effort	Rate	Amount
Project Management	P2 close out, final documentation	0	\$130	\$0
Budget Analyst	Final Billing, documentation	0	\$100	\$0
Tech Lead	Return remaining funding, final documentation, labor code c/o	0	\$140	\$0
Total Task 4 - Close Out				\$0

TOTAL IAG Cost	\$310,052
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